In reviewing SIP submissions, EPA’s role is to approve state choices, provided that they meet the criteria of the Clean Air Act. In this context, in the absence of a prior existing requirement for the State to use voluntary consensus standards (VCS), EPA has no authority to disapprove a SIP submission for failure to use VCS. It would thus be inconsistent with applicable law for EPA, when it reviews a SIP submission, to use VCS in place of a SIP submission that otherwise satisfies the provisions of the Clean Air Act. Thus, the requirements of section 12(d) of the National Technology Transfer and Advancement Act of 1995 (15 U.S.C. 272 note) do not apply. This rule does not impose an information collection burden under the provisions of the Paperwork Reduction Act of 1995 (44 U.S.C. et seq.).

The Congressional Review Act, 5 U.S.C. section 801 et seq., as added by the Small Business Regulatory Enforcement Fairness Act of 1996, generally provides that before a rule may take effect, the agency promulgating the rule must submit a rule report, which includes a copy of the rule, to each House of the Congress and to the Comptroller General of the United States. EPA will submit a report containing this rule and other required information to the U.S. Senate, the U.S. House of Representatives, and the Comptroller General of the United States prior to publication of the rule in the Federal Register. A major rule cannot take effect until 60 days after it is published in the Federal Register. This action is not a “major rule” as defined by 5 U.S.C. section 804(2).

Under section 307(b)(1) of the Clean Air Act, petitions for judicial review of this action must be filed in the United States Court of Appeals for the appropriate circuit by February 18, 2003. Filing a petition for reconsideration by the Administrator of this final rule does not affect the finality of this rule for the purposes of judicial review nor does it extend the time within which a petition for judicial review may be filed, and shall not postpone the effectiveness of such rule or action. This action may not be challenged later in proceedings to enforce its requirements. (See section 307(b)(2).)

**EPA-APPROVED MISSISSIPPI REGULATIONS**

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<th>State effective date</th>
<th>EPA approval date</th>
<th>Comments</th>
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<td>05/28/99</td>
<td>12/20/02</td>
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<td>Section 6</td>
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<td>05/28/99</td>
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**ACTION:** Notice of acceptability.

**SUMMARY:** This notice of acceptability expands the list of acceptable substitutes for ozone-depleting substances (ODS) under the U.S. Environmental Protection Agency’s (EPA) Significant New Alternatives Policy (SNAP) program. The substitutes are for use in the following sectors: refrigeration and air conditioning, solvents cleaning, fire suppression and explosion protection, and aerosols.

**EFFECTIVE DATE:** December 20, 2002.

**ADDRESSES:** Information relevant to this notice is contained in Air Docket A–91–42, 1301 Constitution Avenue, NW.; U.S. Environmental Protection Agency, Mail Code 6102T; Washington, DC, 20460. The docket reading room is located at the address above in room B102 in the basement. Reading room telephone: (202) 566–1744, facsimile: (202) 566–1749 Air docket staff telephone: (202) 566–1742 and facsimile: (202) 566–1741 You may inspect the docket between 8:30 a.m. and 4:30 p.m. weekdays. As provided in 40 CFR part 2, a reasonable fee may be charged for photocopying.

**FOR FURTHER INFORMATION CONTACT:** Margaret Sheppard by telephone at (202) 564–9163, by fax at (202) 565–2155, by e-mail at sheppard.margaret@epa.gov, or by mail at U.S. Environmental Protection Agency.
Agency, 1200 Pennsylvania Avenue, NW., Mail Code 6205J, Washington, DC 20460. Overnight or courier deliveries should be sent to 501 3rd Street, NW., Washington, DC 20001.

For more information on the Agency’s process for administering the SNAP program or criteria for evaluation of substitutes, refer to the original SNAP rulemaking published in the Federal Register on March 18, 1994 (59 FR 13044). Notices and rulemakings under the SNAP program, as well as other EPA publications on protection of stratospheric ozone, are available from EPA’s Ozone Depletion World Wide Web site at http://www.epa.gov/ozone including the SNAP portion at http://www.epa.gov/ozone/snap/.

SUPPLEMENTARY INFORMATION:
I. Listing of Acceptable Substitutes
   A. Refrigeration and Air Conditioning
   B. Solvent Cleaning
   C. Fire Suppression
   D. Aerosols
II. Section 612 Program
   A. Statutory Requirements
   B. Regulatory History
Appendix A—Summary of Acceptable Decisions

I. Listing of Acceptable Substitutes

This section presents EPA’s most recent acceptable listing decisions for substitutes in the following industrial sectors: refrigeration and air conditioning, solvent cleaning, fire suppression and explosion protection, and aerosols. For copies of the full list of SNAP decisions in all industrial sectors, visit EPA’s Ozone Depletion web site at http://www.epa.gov/ozone/snap/lists/index.html.

The sections below discuss the substitute listing in detail. Appendix A contains a table summarizing today’s listing decisions. The statements in the “Further Information” column in the table provide additional information, but are not legally binding under section 612 of the Clean Air Act. In addition, the “Further Information” may not be a comprehensive list of other legal obligations you may need to meet when using the substitute. Although you are not required to follow recommendations in the “Further Information” column of the table to use a substitute, EPA strongly encourages you to apply the information when using these substitutes. In many instances, the information simply refers to standard operating practices in existing industry and/or building-code standards. Thus, many of these statements, if adopted, would not require significant changes to existing operating practices.

Submissions to EPA for the use of the substitutes listed in this document may be found under category VI–D of EPA air docket A–91–42 at the address described above under ADDRESSES. You can find other materials supporting the decisions in this action under category IX–B of EPA docket A–91–42.

A. Refrigeration and Air Conditioning

1. and 2. R-404A and R-507A

   • Retail food refrigeration
   • Cold storage warehouses
   • Commercial ice machines
   • Refrigerated transport
   • Ice skating rinks
   • Water coolers
   • Residential dehumidifiers
   • Vending machines
   • Industrial process air conditioning
   • Reciprocating chillers
   • Screw chillers
   • Centrifugal chillers
   • Industrial process refrigeration
   • Very low temperature refrigeration
   • Non-mechanical heat transfer systems

   • Household refrigerators and freezers
   • Household and light commercial air conditioning
   • Industrial process refrigeration
   • Very low temperature refrigeration
   • Non-mechanical heat transfer systems

R-404A is a blend of 44% by weight HFC-125 (pentafluoroethane), 52% by weight HFC-143a (1,1,1,2-tetrafluoroethane) and 4% by weight HFC-134a (1,1,2-trifluoroethane). You may find the substitution under EPA Air Docket A–91–42, items VI–D–284 and VI–D–287. R-507A, also known as R-507, is a blend of 50% by weight HFC-125 (pentafluoroethane) and 50% by weight HFC-143a (1,1,1-trifluoroethane).

EPA previously listed both R-404A and R-507A as acceptable alternatives for various CFCs (e.g., R-12) and CFC-containing blends (e.g., R-500 and R-502) in several applications in the original SNAP rulemaking published in the Federal Register on March 18, 1994 (59 FR 13044) and in subsequent SNAP Notices (August 26, 1994, 59 FR 44240; January 13, 1995, 60 FR 3318). EPA previously listed R-404A and R-507A as acceptable substitutes for HCFC-22 in various end uses (March 22, 2002, 67 FR 13272 for R-404A; September 5, 1996, 61 FR 47012 for R-507A). Since that time, many users have switched directly from CFCs to R-404A or R-507A, while others have switched to HCFC-22 or many different HCFC blends found acceptable under various SNAP rulemakings and notices. Today’s decision finds it acceptable to switch from HCFC-22 and HCFC blends to R-404A or R-507A in the end uses listed above.

Environmental Information

The ozone depletion potential (ODP) of R-404A and of R-507A is zero. The Global Warming Potentials (GWP) of HFC–125, HFC–143a and HFC–134a are 3400, 4300 and 1300, respectively (relative to carbon dioxide, using a 100-year time horizon).

All components of these blends have been exempted from listing as a volatile organic compound (VOC) under Clean Air Act regulations concerning the development of state implementation plans (SIPs) at 40 CFR 51.100(s).

Flammability Information

While HFC–143a is moderately flammable, the blends are not flammable.

Toxicity and Exposure Data

All components of the blend have workplace environmental exposure limits (WEELs) of 1000 ppm established by the American Industrial Hygiene Association (AIHA). EPA expects users to follow all recommendations specified in the Material Safety Data Sheet (MSDS) for the blend and the individual components and other safety precautions common in the refrigeration and air conditioning industry. We also expect that users of R-404A and R-507A will adhere to the AIHA’s WEELs.

Comparison to Other Refrigerants

R-404A and R-507A are not ozone depleting; thus, they reduce risk from ozone depletion compared to HCFC-22, the ODS they replace, and blends containing HCFCs. Flammability and toxicity risks are low, as discussed above. Thus, we find that R-404A and R-507A are acceptable because they reduce overall risk to public health and the environment in the end uses listed.

3. RS–24

EPA’s decision: RS–24 is acceptable for use in new and retrofit equipment as a substitute for CFC–12 in the following end uses:
   • Industrial process refrigeration
   • Industrial process air conditioning
   • Ice skating rinks
   • Cold storage warehouses
   • Refrigerated transport
   • Retail food refrigeration
   • Vending machines
   • Water coolers
   • Commercial ice machines
   • Household refrigerators and freezers
   • Residential dehumidifiers

RS–24 is acceptable, subject to use conditions, for use in new and retrofit
equipment as a substitute for CFC–12 in the following end use:
- Motor vehicle air conditioning

Conditions for Use in Motor Vehicle Air Conditioning Systems

Regulations regarding recycling and prohibiting venting issued under section 609 of the Clean Air Act apply to this blend (subpart G of 40 CFR part 82). That rule provided that EPA would list new refrigerants in future notices of acceptability. Therefore, the use of RS–24 as a CFC–12 substitute in motor vehicle air conditioning systems must follow the standard conditions imposed on previous refrigerants, including:
- The use of unique fittings designed by the refrigerant manufacturer,
- The application of a detailed label,
- The removal of the original refrigerant prior to charging with RS–24, and
- The installation of a high-pressure compressor cutoff switch on systems equipped with pressure relief devices.

The October 16, 1996, rule gives full details on these use conditions.

You must use the following fittings to use RS–24 in motor vehicle air conditioning systems:

<table>
<thead>
<tr>
<th>Fitting type</th>
<th>Diameter (inches)</th>
<th>Thread pitch (threads/inch)</th>
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<tbody>
<tr>
<td>Low-side service port</td>
<td></td>
<td>quick-connect</td>
<td></td>
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<tr>
<td>High-side service port</td>
<td></td>
<td>quick-connect</td>
<td></td>
</tr>
<tr>
<td>Large containers (&gt;20 lb.)</td>
<td></td>
<td>quick-connect</td>
<td></td>
</tr>
<tr>
<td>Small cans</td>
<td></td>
<td>quick-connect</td>
<td></td>
</tr>
</tbody>
</table>

The quick-connect fittings have been reviewed and found to be sufficiently different from HFC–134a and FRIGC FR–12 quick-connect fittings to be considered unique. The labels will have a gold background and black text.

The submitter of RS–24 claims that the composition of this HFC blend is confidential business information. You can find a version of the submission with information claimed confidential by the submitter removed in EPA Air Docket A–91–42, item VI–D–281.

Environmental Information

The ozone depletion potential (ODP) of RS–24 is zero. The Global Warming Potentials (GWPs) of the constituents are between zero and approximately 4000 (relative to carbon dioxide, using a 100-year time horizon).

At least one component of this blend has not been exempted from listing as a VOC under Clean Air Act regulations concerning the development of SIPs at 40 CFR 51.100(s).

Flammability Information

While at least one component of the blend is moderately flammable, the blend is not flammable.

Toxicity and Exposure Data

Components of the blend have workplace guidance level exposure limits on the order of 500 to 1000 ppm. EPA believes this exposure limit will be protective of human health and safety. EPA expects users to follow all recommendations specified in the Material Safety Data Sheet (MSDS) for the blend and the individual components and other safety precautions common in the refrigeration and air conditioning industry.

Comparison to Other Refrigerants

RS–24 is not an ozone depleter; thus, it reduces risk from ozone depletion compared to CFC–12, the ODS it replaces. RS–24 has a comparable or lower GWP than the other substitutes for CFC–12. Flammability and toxicity risks are low, as discussed above. Thus, we find that RS–24 is acceptable because it reduces overall risk to public health and the environment in the end uses listed.

4. NU–22

EPA’s decision: NU–22 [R–125/134a/600 (46.6/50.0/3.4)] is acceptable for use in new and retrofit equipment as a substitute for R–502 in:
- Industrial process refrigeration
- Industrial process air-conditioning
- Cold storage warehouses
- Refrigerated transport
- Retail food refrigeration
- Commercial ice machines
- Vending machines
- Water coolers
- Ice skating rinks

NU–22 is a blend of 46.6 percent HFC–125, 50.0 percent HFC–134a, and 3.4 percent n-butane.

You can find the most recent submission in EPA Air Docket A–91–42, item VI–D–286.

In SNAP Notice of Acceptability #16 (March 22, 2002; 67 FR 13272), EPA noted that the composition of NU–22 was changed to match that of ISCEON 59, and that EPA previously found ISCEON 59 acceptable as a substitute for R–22 in a number of end uses in SNAP Notice of Acceptability #11 (December 6, 1999; 64 FR 68039).

Environmental Information

For environmental information on HFC–125 and HFC–134a, see above in section I.A.1 for R–404A. The ozone depletion potential (ODP) of NU–22 is zero. The Global Warming Potential (GWP) of butane is less than 10 (relative to carbon dioxide, using a 100-year time horizon). Butane is a VOC under Clean Air Act regulations concerning the development of SIPs at 40 CFR 51.100(s).

Flammability Information

While butane, one component of the blend, is flammable, the blend is not flammable.

Toxicity and Exposure Data

HFC–125 and HFC–134a have guidance level WEELs of 1000 ppm established by the AIHA. Butane has a threshold limit value (TLV) of 800 ppm established by the American Conference of Goverment Industrial Hygienists (ACGIH). EPA expects users to follow all recommendations specified in the Material Safety Data Sheet (MSDS) for the blend and the individual components and other safety precautions common in the refrigeration and air conditioning industry. We also expect that users of NU–22 will adhere to the AIHA’s WEELs and the ACGIH’s TLVs.

Comparison to Other Refrigerants

NU–22 is not an ozone depleter; thus, it reduces risk from ozone depletion compared to R–502, the ODS it replaces. NU–22 has a comparable or lower GWP than the other substitutes for R–502. Flammability and toxicity risks are low, as discussed above. Thus, we find that NU–22 is acceptable because it reduces overall risk to public health and the environment in the end uses listed.
5. R-407C

- Retail food refrigeration
- Cold storage warehouses
- Commercial ice machines
- Refrigerated transport
- Ice skating rinks
- Water coolers
- Residential dehumidifiers
- Vending machines
- Industrial process air conditioning
- Reciprocating chillers
- Screw chillers
- Centrifugal chillers
- Industrial process refrigeration
- Very low temperature refrigeration
- Non-mechanical heat transfer systems
- Household refrigerators and freezers
- Household and light commercial air conditioning

R-407C is a blend of 23% by weight HFC–32 (difluoromethane), 25% by weight HCFC–125 (pentfluoroethane), and 52% by weight HCFC–134a (1,1,1,2-tetrafluoroethane).

EPA previously listed R-407C as an acceptable alternative for HCFC–22 and CFCs in various end uses under SNAP (February 8, 1996; 61 FR 4736). Since that time, many users have switched to R-407C, while others have switched to many different HCFC blends found acceptable under various SNAP rulemakings and notices. Today’s decision finds it acceptable to switch from HCFC blends to R-407C.

Environmental Information

The ozone depletion potential (ODP) of R-407C is zero. The Global Warming Potentials (GWPs) of HFC–125, HCFC–32 and HCFC–134a are 3400, 880, and 1300, respectively (relative to carbon dioxide, using a 100-year time horizon). HCFC–32 is the only component of this blend that is a VOC under Clean Air Act regulations.

Flammability Information

While HFC–32 is moderately flammable, the blend is not flammable.

Toxicity and Exposure Data

All components of the blend have workplace environmental exposure limits (WEELs) of 1000 ppm established by the American Industrial Hygiene Association (AIHA). EPA expects users to follow all recommendations specified in the Material Safety Data Sheet (MSDS) for the blend and the individual components and other safety precautions common in the refrigeration and air conditioning industry. We also expect that users of R-407C will adhere to the AIHA’s WEELs.

Comparison to Other Refrigerants

R-407C is not an ozone depleter; thus, it reduces risk from ozone depletion compared to HCFC–22, the ODS it replaces, and blends containing HCFCs. R-407C has a comparable or lower GWP than the other substitutes for HCFC–22. Flammability and toxicity risks are low, as discussed above. Thus, we find that R-407C is acceptable because it reduces overall risk to public health and the environment in the end uses listed.

6. R-410A

- Retail food refrigeration
- Cold storage warehouses
- Commercial ice machines
- Refrigerated transport
- Ice skating rinks
- Water coolers
- Residential dehumidifiers
- Vending machines
- Industrial process air conditioning
- Reciprocating chillers
- Screw chillers
- Centrifugal chillers
- Industrial process refrigeration
- Very low temperature refrigeration
- Non-mechanical heat transfer systems
- Household refrigerators and freezers
- Household and light commercial air conditioning

R-410A is a blend of 23% by weight HCFC–32 (difluoromethane) and 50% by weight HCFC–125 (pentfluoroethane) and 22, the ODS it replaces, and blends containing HCFCs. Flammability and toxicity risks are low, as discussed above. Thus, we find that R-410A is acceptable because it reduces overall risk to public health and the environment in the end uses listed.

Environmental Information

The ozone depletion potential (ODP) of R-410A is zero. The Global Warming Potentials (GWPs) of HFC–125, HCFC–32 and HCFC–134a are 3400, 880, and 1300, respectively (relative to carbon dioxide, using a 100-year time horizon). HCFC–32 is the only component of this blend that is a VOC under Clean Air Act regulations.

Flammability Information

While HFC–32 is moderately flammable, the blend is not flammable.

Toxicity and Exposure Data

For toxicity and exposure data on HFC–125 and HFC–32, see section I.A.5 above for R-407C. We expect that users of R-410A will adhere to the AIHA’s WEELs.

Comparison to Other Refrigerants

R-410A is not an ozone depleter; thus, it reduces risk from ozone depletion compared to HCFC–22, the ODS it replaces, and blends containing HCFCs. Flammability and toxicity risks are low, as discussed above. Thus, we find that R-410A is acceptable because it reduces overall risk to public health and the environment in the end uses listed.

7. R-414B

EPA’s decision: R-414B [R-22/124/600a/142b (50/39/1.5/9.5)] is acceptable for use in new and retrofit equipment as a substitute for CFC–12 and CFC–114 in:
- Industrial process air conditioning
- Reciprocating chillers
- Commercial ice machines
- Ice skating rinks
- Water coolers
- Residential dehumidifiers
- Vending machines
- Industrial process air conditioning
- Reciprocating chillers
- Screw chillers
- Centrifugal chillers
- Industrial process refrigeration
- Very low temperature refrigeration
- Non-mechanical heat transfer systems
- Household refrigerators and freezers
- Household and light commercial air conditioning

R-414B is a blend of 23% by weight HFC–32 (difluoromethane) and 50% by weight HCFC–125 (pentfluoroethane) and 22, the ODS it replaces, and blends containing HCFCs. Flammability and toxicity risks are low, as discussed above. Thus, we find that R-414B is acceptable because it reduces overall risk to public health and the environment in the end uses listed.

Environmental Information

The ozone depletion potential (ODPs) of HCFC–22, HCFC–124 and HCFC–142b are 0.055, 0.022 and 0.065, respectively. The global warming potentials (GWPs) are 1700, 620 and 2400, respectively (relative to carbon dioxide, using a 100-year time horizon). Isobutane is under Clean Air Act regulations concerning the development of SIPs at 40 CFR 51.100(s).

Flammability Information

While HCFC–142b and isobutane are flammable, the blend is not flammable.

Toxicity and Exposure Data

HCFC–22, HCFC–124 and HCFC–142b have workplace environmental exposure
Comparison to Other Refrigerants

R–414B has a much lower ozone-depletion potential than CFC–12 and CFC–114, the ODSs it replaces; thus, it reduces risk from ozone depletion. R–414B has a comparable or lower GWP than the other substitutes for CFC–12 and CFC–114 in the end-use listed. Flammability and toxicity risks are low, as discussed above. Thus, we find that R–414B is acceptable because it reduces overall risk to public health and the environment in the end-use listed.

Comparison to Other Cleaning Solvents

1. HCFC–225ca/cb

EPA’s Decision: HCFC–225ca and HCFC–225cb are acceptable for use as a substitute for CFC–113 and methyl chloroform in the metals cleaning end-use.

HCFC–225ca is also called 3,3-dichloro-1,1,2,2-pentafluoro propane. HCFC–225cb is also called 1,3-dichloro 1,1,2,2,3-pentafluoropropane. They are sold in a commercial blend of 45% of the ca isomer and 55% of the cb isomer (“HCFCca/cb”).

EPA has previously found HCFC–225ca/cb acceptable subject to use conditions for use in solvents cleaning in the precision cleaning and electronics cleaning end uses (June 13, 1995, 60 FR 31092) and acceptable for use in aerosol solvents (April 28, 1999, 64 FR 22981).

Environmental Information

HCFC–225ca and HCFC–225cb have ozone depletion potential (ODPs), respectively, of 0.025 and 0.033. HCFC–225ca and HCFC–225cb have global warming potentials (GWPs) of 180 and 620, respectively, over a 100-year time horizon. HCFC–225ca has an atmospheric lifetime (ALT) of 2.1 years and HCFC–225cb has an ALT of 6.2 years.

HCFC–225ca, HCFC–225cb, and the commercial blend of HCFC–225ca/cb have been exempted from listing as volatile organic compounds (VOCs) under Clean Air Act regulations concerning the development of state implementation plans at 40 CFR 51.100(s).

Flammability


Toxicity and Exposure Data

The manufacturer’s recommended exposure guidelines over an eight-hour time-weighted average are 50 ppm for HCFC–225ca, 400 ppm for HCFC–225cb, and 100 ppm for the commercial mixture of HCFC–225ca/cb. EPA initially established a use condition for HCFC–225ca/cb in the precision cleaning and electronics cleaning end uses and did not issue an acceptability determination for the metal cleaning end use because of earlier data indicating the exposure guideline for the commercial mixture should be only 50 ppm. More recent analysis of the toxicological data indicate that a higher exposure guideline is appropriate (SNAP Notice #16, March 22, 2002, 67 FR 13272). EPA expects users of HCFC–225ca/cb to follow all recommendations specified in the manufacturer’s Material Safety Data Sheets (MSDSs).

Comparison to Other Cleaning Solvents

HCFC–225ca and HCFC–225cb have ODPs of 0.025 and 0.033, respectively; thus, they reduce risk overall compared to CFC–113 and methyl chloroform, the ODSs they replace. HCFC–225ca and HCFC–225cb have comparable or lower GWP than some acceptable substitutes for CFC–113 and methyl chloroform. HCFC–225ca and HCFC–225cb are non-flammable. HCFC–225ca and HCFC–225cb are VOC-exempt. Thus, we find that HCFC–225ca, HCFC–225cb, and the commercial blend of HCFC–225ca/cb are acceptable because they reduce overall risk to public health and the environment in the end-use listed.

C. Fire Suppression and Explosion Protection

1. C6-perfluoroketone

EPA’s decision: C6-perfluoroketone is acceptable as a substitute for halon 1301 in the total flooding end-use for both normally occupied and unoccupied spaces.

C6-perfluoroketone is comprised of a perfluoroalkyl ketone (1,1,1,2,4,5,5,5-nonafluoro-4-(trifluoromethyl)-3-pentanone). It is marketed under the trade name Novex-1230. Other names include FK–5–1–12mm2y, perfluoro-2-methyl-3-pentanone, and L–15566. You can find a version of the submission with information claimed confidential by the submitter removed in EPA Air Docket A–91–42, items VI–D–269 and VI–D–277. Additional information on this fire suppressant is available in EPA Air Docket A–2002–08.

Environmental Information

C6-perfluoroketone has no ozone-depletion potential, a global warming potential of six to 100 relative to CO2 over a 100 year time horizon, and an atmospheric lifetime of less than three days.

Flammability

C6-perfluoroketone is non-flammable.

Toxicity and Exposure Data

The C6-perfluoroketone was assayed for its ability to induce cardiac sensitization in the beagle dog (Huntington 2001). In that study, the cardiotoxic NOAEL was determined to be 10 percent. The manufacturer’s maximum design concentration of 6.44 percent is significantly below the cardiotoxic NOAEL.

Appropriate protective measures should be taken and proper training administered for the manufacture, clean-up and disposal of this product and for the installation and maintenance of the total flooding systems using this product. EPA recommends the following for establishments installing and maintaining total flooding systems using this agent:

• Install and use adequate ventilation;
• Clean up all spills immediately in accordance with good industrial hygiene practices;
• Provide training for safe handling procedures to all employees that would be likely to handle containers of the agent or extinguishing units filled with the agent; and
• Provide safety features such as pre-discharge alarms, time delays, and system abort switches, as directed by applicable OSHA regulations and NFPA standards. EPA recommends that unnecessary exposure to fire suppression agents and their decomposition products be avoided and that personnel exposure be limited to no more than 5 minutes.

Use of this agent should conform with relevant Occupational Safety and Health Administration (OSHA) requirements, including 29 CFR 1910, subpart L, sections 1910.160 and 1910.162. EPA expects that users will follow the safety guidelines in the NFPA 2001 standard for clean agent fire extinguishing systems and the guidelines in the manufacturer’s MSDSs.
Comparison to Other Fire Suppressants

EPA has reviewed the potential environmental impacts of this substitute and has concluded that, by comparison to halon 1301 and other acceptable substitutes, C6-perfluoroketone significantly reduces overall risk to the environment. With no ozone-depletion potential, a global warming potential value of less than 100, and an atmospheric lifetime of less than three days, C6-perfluoroketone provides an improvement over use of halon 1301, hydrochlorofluorocarbons (HCFCs) and hydrofluorocarbons (HFCs) in fire protection. We find that C6-perfluoroketone is acceptable because it reduces overall risk to public health and the environment in the end use listed.

D. Aerosols

1. HCFC–225ca/cb

EPA's Decision: HCFC–225ca and HCFC–225cb are acceptable for use as a substitute for HCFC–141b in the aerosol solvent end use.

For further information on HCFC–225ca and HCFC–225cb, see section B., Solvent Cleaning, above.

Comparison to Other Aerosol Solvents

HCFC–225ca and HCFC–225cb have ODPs of 0.025 and 0.033, while HCFC–141b has an ODP of 0.11; thus, HCFC–225ca and –225cb reduce risk overall compared to HCFC–141b, the ODS they replace. HCFC–225ca and HCFC–225cb have GWPs of 180 and 620, respectively, which are comparable or lower than the GWP of HCFC–141b (700) and the GWPs of some acceptable substitutes for HCFC–141b. HCFC–225ca and HCFC–225cb are non-flammable. They are less toxic than some other acceptable substitutes for HCFC–141b. HCFC–225ca and –225cb are VOC-exempt and are not hazardous air pollutants, unlike many alternatives in this end use.

Therefore, we find that HCFC–225ca, HCFC–225cb, and the commercial blend of HCFC–225ca/cb are acceptable because they reduce overall risk to public health and the environment in the end use listed.

II. Section 612 Program

A. Statutory Requirements

Section 612 of the Clean Air Act authorizes EPA to develop a program for evaluating alternatives to ozone-depleting substances. We refer to this program as the Significant New Alternatives Policy (SNAP) program. The major provisions of section 612 are:

- Rulemaking—Section 612(c) requires EPA to promulgate rules making it unlawful to replace any class I (chlorofluorocarbon, halon, carbon tetrachloride, methyl chloroform, methyl bromide, and hydrobromofluorocarbon) or class II (hydrochlorofluorocarbon) substance with any substitute that the Administrator determines may present adverse effects to human health or the environment where the Administrator has identified an alternative that (1) reduces the overall risk to human health and the environment, and (2) is currently or potentially available.

- Listing of Unacceptable/Acceptable Substitutes—Section 612(c) also requires EPA to publish a list of the substitutes unacceptable for specific uses. EPA must publish a corresponding list of acceptable alternatives for specific uses.

- Petition Process—Section 612(d) grants the right to any person to petition EPA to add a substance to or delete a substance from the lists published in accordance with section 612(c). The Agency has 90 days to grant or deny a petition. Where the Agency grants the petition, it must publish the revised lists within an additional six months.

- 90-day Notification—Section 612(e) directs EPA to require any person who produces a chemical substitute for a class I substance to notify the Agency not less than 90 days before new or existing chemicals are introduced into interstate commerce for significant new uses as substitutes for a class I substance. The producer must also provide the Agency with the producer's unpublished health and safety studies on such substitutes.

- Outreach—Section 612(b)(1) states that the Administrator shall seek to maximize the use of federal research facilities and resources to assist users of class I and II substances in identifying and developing alternatives to the use of such substances in key commercial applications.

- Clearinghouse—Section 612(b)(4) requires the Agency to set up a public clearinghouse of alternative chemicals, product substitutes, and alternative manufacturing processes that are available for products and manufacturing processes which use class I and II substances.

B. Regulatory History

On March 18, 1994, EPA published the final rulemaking (59 FR 13044) which described the process for administering the SNAP program. In the same notice, we issued the first acceptability lists for substitutes in the major industrial use sectors. These sectors include:

- Refrigeration and air conditioning;
- Foam blowing;
- Solvents cleaning;
- Fire suppression and explosion protection;
- Sterilants;
- Aerosols;
- Adhesives, coatings and inks; and
- Tobacco expansion.

These sectors compose the principal industrial sectors that historically consumed the largest volumes of ozone-depleting compounds.

As described in this original rule for the SNAP program, EPA does not believe that rulemaking procedures are required to list alternatives as acceptable with no limitations. Such listings do not impose any sanction, nor do they remove any prior license to use a substance. Therefore, by this notice we are adding substances to the list of acceptable alternatives without first requesting comment on new listings.

However, we do believe that notice-and-comment rulemaking is required to place any substance on the list of prohibited substitutes, to list a substance as acceptable only under certain conditions, to list substances as acceptable only for certain uses, or to remove a substance from the lists of prohibited or acceptable substitutes. We publish updates to these lists as separate notices of rulemaking in the Federal Register.

The Agency defines a “substitute” as any chemical, product substitute, or alternative manufacturing process, whether existing or new, intended for use as a replacement for a class I or class II substance. Anyone who produces a substitute must provide EPA with health and safety studies on the substitute at least 90 days before introducing it into interstate commerce for significant new use as an alternative. This requirement applies to substitute manufacturers, but may include importers, formulators, or end-users, when they are responsible for introducing a substitute into commerce.

You can find a complete chronology of SNAP decisions and the appropriate Federal Register citations from the SNAP section of EPA's Ozone Depletion World Wide Web site at www.epa.gov/ozone/title6/snap/chron.html. This information is also available from the Air Docket (see ADDRESSES section above for contact information).

List of Subjects in 40 CFR Part 82

Environmental protection, Administrative practice and procedure, Air pollution control, Reporting and recordkeeping requirements.

Dated: December 9, 2002.

Brian J. McLean,
Director, Office of Atmospheric Programs, Office of Air and Radiation.

Appendix A: Summary of Acceptable Decisions
### REFRIGERATION AND AIR-CONDITIONING

<table>
<thead>
<tr>
<th>End-Use</th>
<th>Substitute</th>
<th>Decision</th>
<th>Further information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Industrial process refrigeration (retrofit and new)</td>
<td>RS–24 as a substitute for CFC–12</td>
<td>Acceptable</td>
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<td></td>
<td>NU–22 as a substitute for R–502</td>
<td>Acceptable</td>
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<td></td>
<td>R–404A as a substitute for HCFC–22 and HCFC blends.</td>
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<td>See note 1</td>
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<td>R–507A as a substitute for HCFC–22 and HCFC blends.</td>
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<td>See note</td>
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<td></td>
<td>R–407C as a substitute for HCFC–22 and HCFC blends.</td>
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<td>Industrial process refrigeration (new)</td>
<td>RS–24 as a substitute for CFC–12</td>
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<td>Industrial process air conditioning (retrofit and new)</td>
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<tr>
<td>Ice skating rinks (retrofit and new)</td>
<td>RS–24 as a substitute for CFC–12</td>
<td>Acceptable</td>
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<tr>
<td>Cold storage warehouses (retrofit and new)</td>
<td>RS–24 as a substitute for CFC–12</td>
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<td>Refrigerated transport (retrofit and new)</td>
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<td>Retail food refrigeration (retrofit and new)</td>
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<td>Centrifugal chillers (retrofit and new)</td>
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<td>Screw chillers (retrofit and new)</td>
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<tr>
<td>Very low temperature refrigeration (retrofit and new)</td>
<td>R–404A as a substitute for HCFC–22 and HCFC blends.</td>
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<tr>
<td>Non-mechanical heat transfer systems (retrofit and new)</td>
<td>R–404A as a substitute for HCFC–22 and HCFC blends.</td>
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</table>
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<tbody>
<tr>
<td>Household and light commercial air conditioning (retrofit and new)</td>
<td>R-404A as a substitute for HCFC–22 and HCFC blends.</td>
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<td>R-410A as a substitute for HCFC–22 and HCFC blends.</td>
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<tr>
<td>Residential dehumidifiers (retrofit and new)</td>
<td>RS–24 as a substitute for CFC–12</td>
<td>Acceptable</td>
<td>See note</td>
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<td>Residential dehumidifiers (new)</td>
<td>R-410A as a substitute for HCFC–22 and HCFC blends.</td>
<td>Acceptable</td>
<td>See note</td>
</tr>
<tr>
<td>Motor vehicle air conditioning (retrofit and new)</td>
<td>RS–24 as a substitute for CFC–12</td>
<td>Acceptable subject to use conditions.</td>
<td>Users must use the unique fittings and label specified by the manufacturer. Use is subject to requirements under §609 of the Clean Air Act.</td>
</tr>
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### Solvent Cleaning

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</tr>
</thead>
<tbody>
<tr>
<td>Metal cleaning</td>
<td>HCFC–225ca and HCFC–225cb as a substitute for CFC–113 and methyl chloroform.</td>
<td>Acceptable</td>
<td>EPA recommends observing the manufacturer’s recommended exposure guidelines of 50 ppm for the –ca isomer, 400 ppm for the –cb isomer, and 100 ppm for the commercial mixture of HCFC–225ca/cb. EPA encourages users to consider other alternatives that do not have an ozone depletion potential.</td>
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</tbody>
</table>

### Fire Suppression and Explosion Protection

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</thead>
<tbody>
<tr>
<td>Total flooding</td>
<td>C6–perfluoroketone as a substitute for Halon 1301.</td>
<td>Acceptable</td>
<td>Use of the agent should be in accordance with the safety guidelines in the latest edition of the NFPA 2001 Standard for Clean Agent Fire Extinguishing Systems. For operations that install and maintain total flooding systems using this agent, EPA recommends the following: — Install and use adequate ventilation; — Clean up all spills immediately in accordance with good industrial hygiene practices; and — Provide training for safe handling procedures to all employees that would be likely to handle containers of the agent or extinguishing units filled with the agent. See additional notes 1, 2, 3, 4, 5.</td>
</tr>
</tbody>
</table>

Additional notes:
2. Per OSHA requirements, protective gear (SCBA) should be available in the event personnel should reenter the area.
3. Discharge testing should be strictly limited to that which is essential to meet safety or performance requirements.
4. The agent should be recovered from the fire protection system in conjunction with testing or servicing, and recycled for later use or destroyed.
5. EPA has no intention of duplicating or displacing OSHA coverage related to the use of personal protective equipment (e.g., respiratory protection), fire protection, hazard communication, worker training or any other occupational safety and health standard with respect to halon substitutes.

### AEROSOLS

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</thead>
<tbody>
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<td>Aerosol solvents</td>
<td>HCFC–225ca and HCFC–225cb as a substitute for HCFC–141b.</td>
<td>Acceptable .....</td>
<td>EPA recommends observing the manufacturer’s recommended exposure guidelines of 50 ppm for the -ca isomer, 400 ppm for the -cb isomer, and 100 ppm for the commercial mixture of HCFC–225ca/cb. EPA encourages users to consider other alternatives that do not have an ozone depletion potential.</td>
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</table>

### DEPARTMENT OF DEFENSE

48 CFR Part 208 and Appendix G to Chapter 2

Defense Federal Acquisition Regulation Supplement: Technical Amendments

**AGENCY:** Department of Defense (DoD).

**ACTION:** Final rule.

**SUMMARY:** DoD is making technical amendments to the Defense Federal Acquisition Regulation Supplement to update titles, section numbers, and paragraph designations.

**EFFECTIVE DATE:** December 20, 2002.


### SUPPLEMENTARY INFORMATION:

A. Background

This final rule amends DFARS 219.7104 and Appendix I to implement section 812 of the National Defense Authorization Act for Fiscal Year 2002 (Pub. L. 107–107). Section 812 extends, through September 30, 2005, the period during which companies may enter into agreements under the DoD Pilot Mentor-Protégé Program. In addition, section 812 extends, through September 30, 2008, the period during which monitor firms may incur costs that are eligible for reimbursement or credit under the Program.

This rule was not subject to Office of Management and Budget review under Executive Order 12866, dated September 30, 1993.

B. Regulatory Flexibility Act

This rule will not have a significant cost or administrative impact on contractors or offerors, or a significant effect beyond the internal operating procedures of DoD. Therefore, publication for public comment is not required. However, DoD will consider comments from small entities concerning the affected DFARS subparts in accordance with 5 U.S.C. 610. Such comments should cite DFARS Case 2002–D029.

C. Paperwork Reduction Act

The information collection requirements associated with the DoD Pilot Mentor Protégé Program have been approved by the Offices of Management and Budget, under Control Number 0704–0332, for use through March 31, 2004.